



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,684	12/18/2000	Xm Wong	2855/29	6553
7590	01/12/2004		EXAMINER	
			MILLER, BRIAN E	
			ART UNIT	PAPER NUMBER
			2652	
DATE MAILED: 01/12/2004 <span style="float: right;">20</span>				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/741,684	WONG ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Brian E. Miller	2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 October 2003.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 7-12 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 7-12 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

Claims 7-12 are now pending.

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 102***

2. Claims 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Albrecht et al (US 5,821,494). Albrecht et al discloses a “disk drive” (see FIG. 1), which includes a bonding pad on a magnetic head terminal 62 (FIG. 12B-12C) which includes a bonding substance 60 which is a conductive adhesive solder film polymer (see col. 11, lines 16-25), applied as a surface finishing material, which material is heat treated “prior to bonding to a surface” (see col. 10, lines 50-53). Additionally, as shown in FIG. 12A the slider bonding pad 62 is “initially without bonding substance” and subsequently is electrically bonded to a suspension bonding pad 64 when the bonding substance 60 is reflowed (see FIG. 12C).
3. Claims 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ainslie et al (US 4,761,699). As shown in FIGs. 4 & 5, a slider 16 is bonded to a suspension 40; each of which have bonding pads 41, 74, 60, 63 to facilitate proper electrical connection therebetween. The bonding substance includes solder 80, 82 and a conductive adhesion film 74, 76, applied as a surface finishing material, which material is heat treated “prior to bonding to a surface” (see col. 7, lines 15-16). Additionally, as shown in FIG. 4, the slider bonding pad is initially without bonding substance, such that as in FIG. 6, the suspension bonding pad(s) 44, 47 and slider

bonding pad(s) 41, 70 are electrically coupled to each other when the bonding substance is reflowed.

***Claim Rejections - 35 USC § 103***

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over either Albrecht et al or Ainslie et al. Albrecht et al or Ainslie et al are silent as to the dimensions, i.e., height and diameter, of the solder bump, however, Albrecht does teach the slider pads to be no larger than 120 um (see col. 11, lines 19-20) which size slider pad would presumably encompass a solder bump having a diameter equal to or approximate to that dimension. Taking this and the knowledge of a skilled artisan into consideration, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided solder bumps within the claimed dimensions to the respective teachings of Albrecht et al or Ainslie et al. The motivation would have been: lacking any unobvious or unexpected results, the particular solder bump height and diameter would have been provided through routine experimentation and optimization so as to optimize the electrical connection with minimal height usage, which would have been realized by a skilled artisan.

***Response to Amendment***

6. Applicant's arguments filed 10/24/03 have been fully considered but they are not persuasive.

A....Applicant asserts that the prior art of record (Albrecht nor Ainslie) does not teach or suggest "a slider bonding pad initially without bonding substance..."

The Examiner maintains that both prior art references would include the above limitation, since, that limitation would be considered a process step. It is understood that the slider bonding pad would initially be without bonding substance, i.e., before assembly (see FIG. 4 of Ainslie et al and/or FIG. 12A of Albrecht et al).

Furthermore, it is noted that a “product by process” claim is directed to the product per se, no matter how actually made; see *In re Hirao*, 190 USPQ 15 at 17 (footnote 3, CCPA 1976); *In re Brown*, 173 USPQ 685 (CCPA 1972); *In re Luck*, 177 USPQ 523 (CCPA 1973); *In re Fessmann*, 180 USPQ 324 (CCPA 1974); *In re Thorpe*, 227 USPQ 964 (CAFC 1985). The patentability of the Final product in a “product by process” claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in “product by process” claims or not. Accordingly, the weight given to the “product by process” limitation is the structure “gleaned” from the process.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2652

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian E. Miller whose telephone number is (703) 308-2850. The examiner can normally be reached on M-TH 7:15am-4:45pm (and every other friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.



**Brian E. Miller  
Primary Examiner  
Art Unit 2652**

bem  
January 9, 2004